

REMARKS

The Office Action dated March 4, 2004 has been carefully reviewed. Claims 1-22 are pending in this patent application. Reconsideration of this application is respectfully requested.

35 U.S.C. § 102 Rejection

Claims 1, 2, 5, 8-11, and 15-19 were rejected under 35 U.S.C. § 102 as being anticipated by Sternberg (Patent Application Publication # US 2003/0111275). Reconsideration of this rejection is respectfully requested.

Discussion Re: Patentability of Claim 8

Claim 8

Among other limitations, claim 8 recites the following:

a load *plate* configured to rest on said first elongated support member and said second elongated support member. (Emphasis added.)

In an apparent attempt to meet the language of claim 8, the Examiner is equating the mattress 12 of Sternberg with the claimed "plate". (See 3/4/04 Office Action at page 2, lines 15-17. However, the term "plate" means "a flat, thin piece of material, such as metal". (See, e.g., dictionary definition in Attachment I). (See also, e.g., U.S. Patent No. 4,043,413 that shows an upper **plate** 14 in FIG. 1 - Attachment II.) The mattress 12 of Sternberg is not a "plate". Indeed, the mattress 12 is not a flat, thin piece of material, such as metal. It is axiomatic that anticipation of a claim under 35 U.S.C. § 102 is proper only if the prior art reference discloses each and every element of the claim. Since Sternberg does

not disclose each and every element of Applicant's claim 8, Ormond does not anticipate Applicant's claim 8.

Discussion Re: Patentability of Claim 9-11 and 15

Each of claims 9-11 and 15 depends directly or indirectly from claim 8. As a result, each of claims 9-11 and 15 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 8.

Discussion Re: Patentability of Claim 1

The discussion relating to the patentability of claim 8 is relevant to the patentability of claim 1. Thus, claim 1 is believed to be allowable over the cited art.

Discussion Re: Patentability of Claim 2 and 5

Each of claims 2 and 5 depends directly from claim 1. As a result, each of claims 2 and 5 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 1.

Discussion Re: Patentability of Claim 16

The discussion relating to the patentability of claim 8 is relevant to the patentability of claim 16. Thus, claim 16 is believed to be allowable over the cited art. Moreover, claim 16 specifically recites that the "load plate *rest[s]* on said first elongated support member and said second elongated support member." (Emphasis added.) The mattress 12 of Sternberg does not "rest on"

either of the scales 20. Rather, as shown in FIG. 5 of Sternberg, the legs 14 are interposed between the mattress 12 and the scales 20, thereby causing the mattress 12 to be spaced apart from the scales 20. Thus, claim 16 is further distinguishable over the cited art.

Discussion Re: Patentability of Claim 17-19

Each of claims 17-19 depends directly or indirectly from claim 16. As a result, each of claims 17-19 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 1.

35 U.S.C. § 103 Rejection

Claims 3, 4, 6, 7, 12-14, and 20-22 were rejected under 35 U.S.C. § 103 as being unpatentable over Sternberg. Reconsideration of this rejection is respectfully requested.

Each of claims 3, 4, 6, and 7 depends directly or indirectly from claim 1. As a result, each of claims 3, 6, and 7 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 1.

Each of claims 12-14 depends directly or indirectly from claim 8. As a result, each of claims 12-14 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 8.

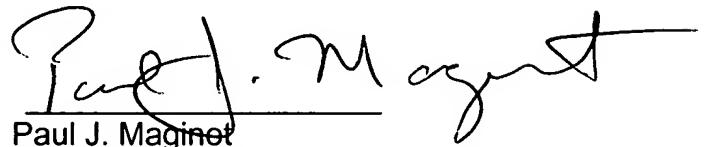
Each of claims 20-22 depends directly or indirectly from claim 16. As a result, each of claims 20-22 is allowable for, at least, the reasons hereinbefore discussed with regard to claim 16.

Conclusion

In view of the foregoing remarks, it is submitted that this application is in condition for allowance. Action to that end is hereby solicited.

Respectfully submitted,

MAGINOT, MOORE & BECK

A handwritten signature in black ink, appearing to read "Paul J. Maginet", written over a horizontal line.

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ATTACHMENT I (4 Pages)

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Not beautiful : homely. —n. An extensive region of level, treeless land. —adv. In a plain manner. —plain'ly adv. —plain'ness n.

plain-clothes man (plān'klōz'mən) also plain-clothes-man (plān'klōz'mən) n. A police officer who wears civilian clothes while on duty.

Plains Indian (plānz) n. A member of any of the American Indian peoples inhabiting the Great Plains of North America.

plain-spoken (plān'spō'kən) adj. Candid : straightforward.

plaint (plānt) n. 1. A complaint. 2. An utterance of sorrow or grief : lamentation.

plain-tiff (plān'tif) n. The party that files a complaint in a lawsuit.

plain-tive (plān'tiv) adj. Expressive of sorrow or melancholy : woeful. —plain'tively adv. —plain'tive-ness n.

plait (plāt, plāt) n. 1. A braid, esp. of hair. 2. A pleat. —plait v.

plan (plān) n. 1. A method or scheme for achieving or doing something. 2. An aim : goal. 3. A diagram or drawing prepared to scale. —v. planned, plan-ning. 1. To draw up a plan of : design <planned a new shopping mall> 2. To have in mind : intend. 3. To formulate a way to achieve or do. —plan'ner n.

plan-ar (plā'nār, -nār) adj. 1. Of or in a geometric plane. 2. Flat <a planar surface> —plan-ar'ity (plā'nār'itē) n.

plane' (plān) n. 1. A surface containing all the straight lines required to connect any 2 points on it. 2. A level or flat surface. 3. A level of development or existence. 4. An airplane. 5. A supporting surface of an airplane.

plane' (plān) n. A tool for leveling or smoothing a wood surface. —v. planed, plan-ing. To level or smooth with or as if with a plane. —plan'er n.

plan-et (plān'it) n. A nonluminous celestial body illuminated by light from a star around which it revolves. —plan'e-tar'y (-i-tēr'ē) adj.

plan-e-tar-i-um (plān'ī-tār'ē-əm) n. pl. -ums or -ia (-ē-ə). 1. A device to project images of celestial bodies in their courses, as onto the inner surface of a dome. 2. A room or building containing a planetarium.

plane tree n. A tree of the genus *Platanus*, with ball-shaped clusters of fruit and outer bark that usu. flakes off in patches.

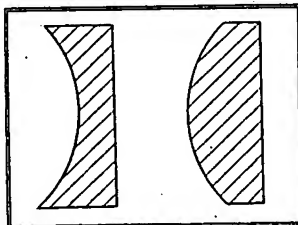
plan-gent (plān'jənt) adj. 1. Deep and reverberating in sound. 2. Plaintive. —plan'gen-cy n. —plan'gent-ly adv.

plank (plāŋk) n. 1. A long, thick board. 2. An item in a political platform. —v. 1. To cover with planks. 2. To cook and serve (meat or fish) on a board. 3. To set or put down with force.

plank-ing (plāŋ'kɪŋ) n. 1. Planks as a whole. 2. Something made of planks.

plank-ton (plāŋk'tən) n. Microscopic plant and animal organisms that float or drift in great numbers in bodies of water. —plank-ton'ic (-tōn'ik) adj.

plano-con-cave (plā'nō-kōn-kāv', -kōn-kāv') adj. Flat or plane on one side and concave on the other.



(Left) planoconcave and (right) planoconvex

plano-con-conv (plā'nō-kōn-kōn-kāv', -kōn-kāv') adj. Flat or plane on one side and convex on the other.

plant (plānt) n. 1. An organism typically having cellulose cell walls, manufacturing its own food by photosynthesis, and being incapable of locomotion. 2. A soft-stemmed, herbaceous plant as distinguished from a tree or shrub. 3. An establishment for industry or manufacturing : factory. 4. The physical structures, equipment, and fixtures of an institution. —v. 1. To place (e.g., seeds) in the ground for growing. 2. To set firmly or forcibly in position. 3. To start : establish. 4. To instill <plant an idea> 5. To place with intent to spy or deceive.

plantain' (plān'tān) n. A weedy plant of the genus *Plantago*, esp. *P. major*, with a spike of small greenish flowers.

plantain' (plān'tān) n. A large tropical plant, *Musa paradisiaca*, resembling the banana and bearing similar fruit.

plantar (plān'tār, -tār') adj. Of, relating to, or located on the sole of the foot.

plan-tation (plān-tā'shən) n. 1. A sizable group of trees or plants under cultivation. 2. A large landed estate devoted to crop production, usu. by resident workers.

plan-ter (plān'tər) n. 1. One that plants, esp. a sowing tool or machine. 2. One who owns or manages a plantation. 3. An ornamental container for a plant.

plaque (plāk) n. 1. A flat piece often made of metal, ornamented or engraved for mounting, as on a building or memorial. 2. An ornamental pin : brooch. 3. A deposit that builds up on a tooth or the inner lining of a blood vessel.

plash (plāsh) n. 1. A light splash. 2. The sound of a splash. —plash v.

plas-ma (plāz'mə) n. 1. The clear, liquid part of blood, lymph, or intramuscular fluid. 2. The watery part of milk : whey. 3. Physics. An electrically neutral, usu. hot gas composed of ions, electrons, and neutral particles. —plas-mat'ic, plas'mic adj.

plas-ter (plās'tər) n. 1. A paste that hardens while drying, used for covering walls and ceilings. 2. Plaster of Paris. 3. An often medicated pastelike mixture spread on a piece of material and applied to a part of the body. —v. To coat or cover with or as if with plaster. —plas'ter-y adj.

plas-ter-board (plās'tər-bōrd', -bōrd') n. A wallboard made up of layers of fiberboard or paper over a plaster core.

plaster of Paris n. A quick-setting paste of white gypsum powder and water, used esp. for casts and statuary molds.

plas-tic (plās'tik) adj. 1. Capable of being shaped or molded : malleable. 2. Of, marked by, or using expressive shaping or modeling <the plastic arts> 3. Marked by artificiality : synthetic <the plastic world of advertising>

—n. A synthetically produced material that can be molded and hardened into objects or formed into films or textile fibers. —plas-tic'i-ty (plāstis'tē) n. —plas'ticize' v.

plastic explosive n. A versatile explosive substance in the form of a moldable dough-like solid.

plastic surgery n. Surgery concerned with repairing, restoring, or remodeling bodily parts chiefly by bone or tissue transfer. —plastic surgeon n.

plas-tique (plās'tēk) n. A plastic explosive.

plate (plāt) n. 1. A flat, thin piece of material, as metal. 2. a. Forged, rolled, or cast metal in sheet form. b. A flat piece of engraved metal. 3. a. A prepared surface, as of metal or plastic, from which printing is done. b. A print from such a surface. c. Something printed from an engraving. 4. A sheet of glass or metal sensitized to light and used in photography. 5. A part made of metal or plastic that is fitted to the gums to hold false teeth in place. 6. *Baseball*. Home plate. 7. A shallow, usu. circular dish. 8. Food and service for one person. 9. Household articles, as forks and knives, made of or plated with gold or silver. —v. plat-ed, plat-ing. 1. To cover with a thin layer of metal, esp. gold or silver. 2. To make a printing surface from or for.

pla-teau (plā-tō') n., pl. -teaus or -teaux (-tōz'). 1. A level expanse of elevated land. 2. a. A stage of development. b. A stable period or state.

plate glass n. Rolled and polished glass in thick, strong sheets.

plat-en (plāt'n) n. 1. A flat metal plate that holds the paper against the type in a printing press. 2. The roller in a typewriter against which the keys hit.

plat-form (plāt'fōrm) n. 1. An elevated horizontal surface, as for speakers or at a railroad station. 2. A formal statement of principles or policy, as of a political party.

plat-ing (plāt'ɪŋ) n. A thin layer, coating, or covering of metal or of metal plates.

plat-i-num (plāt'n-əm) n. Symbol Pt. A silver-white, corrosive-resistant metallic element used esp. in jewelry.

plat-i-tude (plāt'itōd', -tōd') n. A trite

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DICTIONARY
Abbrevia
Biograph
Geograph

Tables
Bible
Currency
Measure

United States Patent [19]

[11] 4,043,413

Schaenen

[45] Aug. 23, 1977

[54] **PORTABLE AND COLLAPSIBLE
BATHROOM-TYPE SCALE**

[56] **References Cited**

U.S. PATENT DOCUMENTS

2,320,992	6/1943	Widmer	73/431
3,106,975	10/1963	Madigan	177/126

[76] **Inventor:** Susan M. Schaenen, 145 Central Park
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[21] **Appl. No.:** 684,443

[57] **ABSTRACT**

[22] **Filed:** May 7, 1976

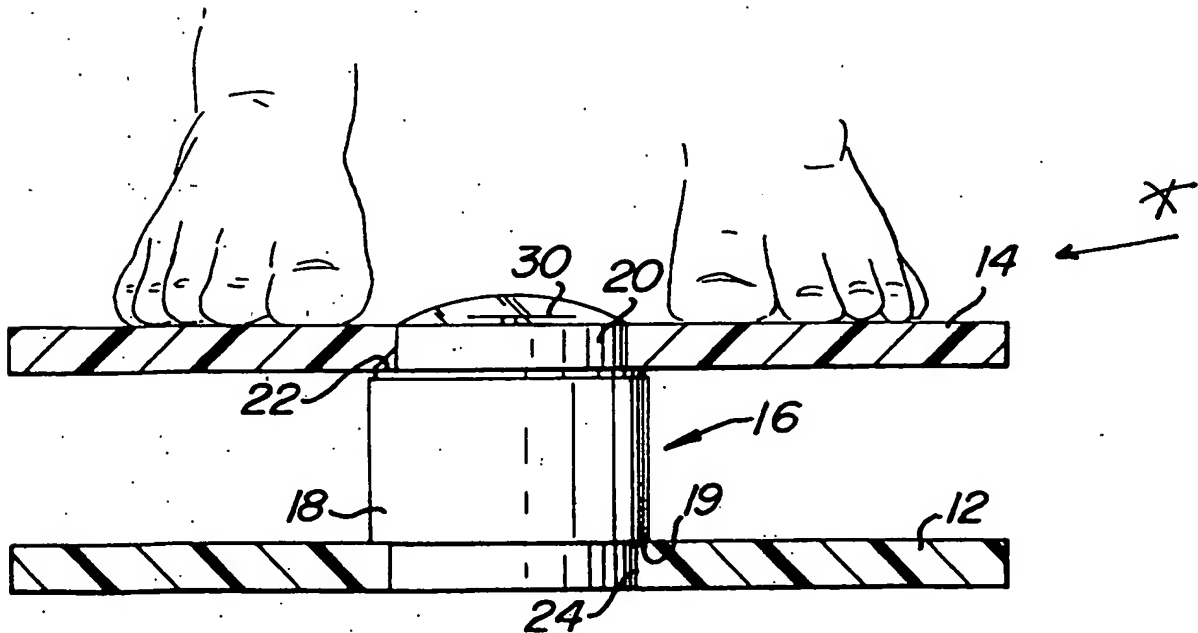
A portable and collapsible scale includes a base plate, a weighing unit removably associated with the base plate, and an upper or platform plate removably associated with the weighing unit. A user may stand on the upper plate and view a weight read-out provided by the weighing unit.

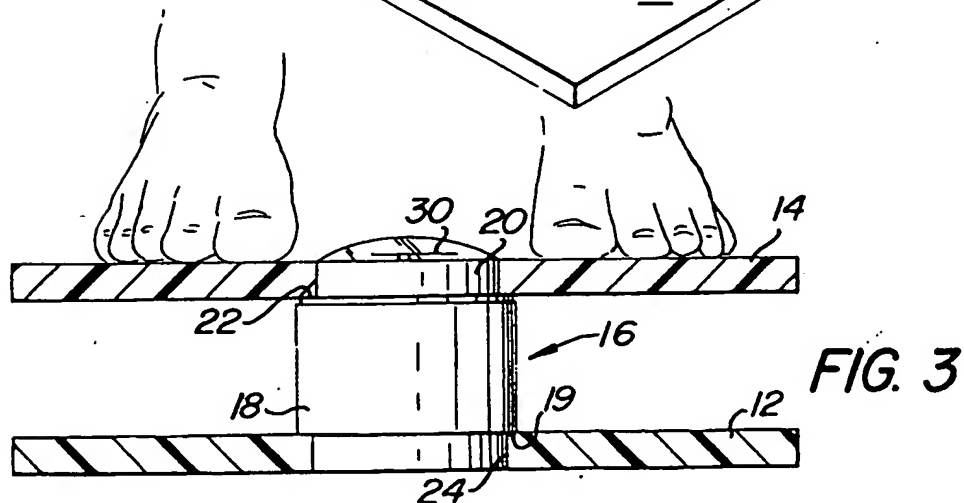
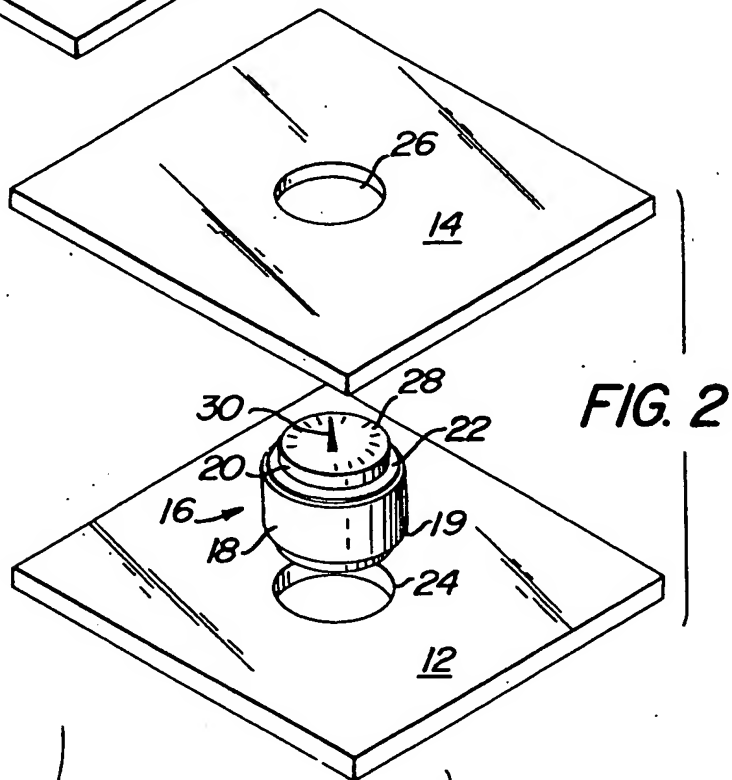
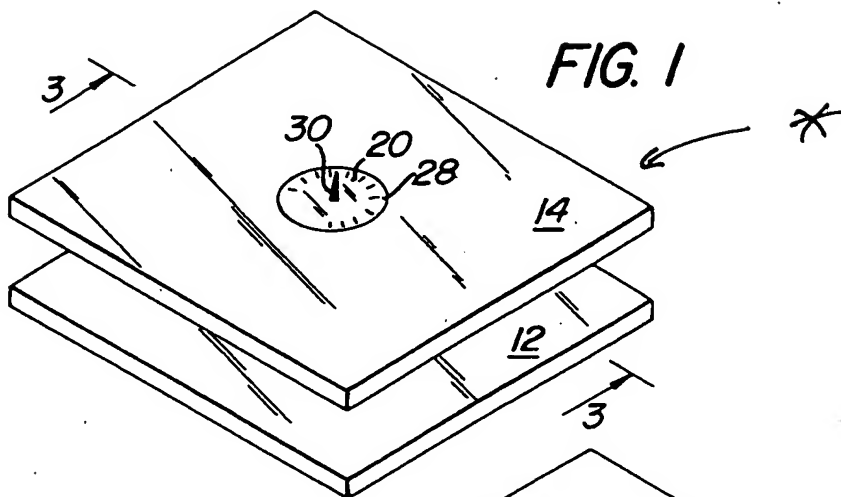
[51] **Int. Cl.²** G01G 21/00; G01G 21/22

[52] **U.S. Cl.** 177/126; 177/263

[58] **Field of Search** 177/126, 127, 263;
73/431

9 Claims, 3 Drawing Figures





PORTABLE AND COLLAPSIBLE BATHROOM-TYPE SCALE

This invention relates to a portable and collapsible scale, and more particularly, a portable and collapsible bathroom-type scale made up of three compact sub-units, which may be readily assembled for use or disassembled for travel or storage. This invention further relates to a portable and collapsible scale sufficiently compact in its disassembled state to be conveniently carried in luggage.

Portable scales, as such, have heretofore been proposed. For example, in U.S. Pat. No. 3,106,975, issued Oct. 15, 1963, to D. M. Madigan, a collapsible scale is disclosed wherein a platform portion and a base portion are slidably interengaged, with a weighing unit, not shown, interconnecting or interposed between them. Hinged or removable extension panels are provided for the platform portion; extensions are provided to stabilize and in effect broaden the base portion; and a weight read-out device is removably coupled to the base portion.

The present invention has as its general object, provision of an extremely simple, light and compact scale, having a bare minimum of parts or sub-units.

It is another object of this invention to provide a portable and collapsible scale which provides for ease of assembly and disassembly.

It is still another object of this invention to provide a portable and collapsible scale made up of easily assembled and disassembled sub-units, each of which is light and compact, and capable of being carried in conventional luggage.

Other objects will appear hereinafter.

The foregoing and other objects of the invention are realized, in a presently preferred form of the invention, by providing a base plate which in operation rests on a floor or other firm support surface, a weighing unit removably engagable with the base plate, and an upper, or platform plate, removably engagable with the weighing unit. The base plate, in the presently preferred form, is provided with a receptacle into which the weighing unit is simply placed, or perhaps friction fitted. The upper or platform plate, in the presently preferred form, rests loosely, or by friction fit, over the weighing unit, so that the entire scale may be assembled without the need for tools or special fasteners. Also, in the preferred form of the invention, the weighing unit includes a read-out, such as a dial or digital read-out, integral therewith, so that the portion of the weighing unit which receives the upper or platform plate extends through that plate and provides a weight read-out visible from above the upper plate.

For the purpose of illustrating the invention, there is shown in the drawings a form of the invention which is presently preferred, it being understood, however, that the invention is not limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view showing a portable and collapsible scale in accordance with the invention, in its assembled and operative condition.

FIG. 2 is an exploded perspective view, showing the interrelationship of the various parts of the invention.

FIG. 3 is a cross-sectional view taken along the line 3-3 in FIG. 1.

Referring now to the drawings in detail, wherein like numerals indicate like elements, there is seen in FIG. 1

a portable and collapsible scale designated generally by the reference numeral 10.

The scale 10 comprises just three major components; namely: a bottom or base plate 12, an upper or platform plate 14, spaced from and parallel to the base plate 12 when operatively disposed, and a weighing unit 16, disposed between and interconnecting the base and upper plates 12 and 14.

In the illustrated form of the invention, the weighing unit 16 is generally cylindrical in cross-section, and includes a main body portion 18 of first cross-sectional dimension and an upper portion 20 extending upwardly from the main body portion 18 and having a reduced cross-sectional dimension. The transition between the main body portion 18 and upper portion 20, provides a generally horizontally extending shoulder 22, upon which the upper or platform plate 14 can rest.

With reference to FIGS. 2 and 3, the interrelationship between the weighing unit 16 and the base and platform plates 12 and 14 is seen.

The base plate 12 is provided with a receptacle 24 extending from its upper surface downwardly, through its thickness. The lower contour of the main body portion 18 of the weighing unit 16 is shaped, as by means of the shoulder 19, complementally with the receptacle 24, and is either loosely or press-fitted into the receptacle when the scale 10 is operatively disposed.

The upper or platform plate 14 is provided with an opening 26, the dimensions of which correspond to the cross-sectional shape and dimension of the upper portion 20 of the weighing unit 16. The upper portion 20 projects upwardly into the opening 26, so that the upper or platform plate 14 rests on the shoulder 22 of the weighing unit 16, and is supported by it. Weight applied to the upper or platform plate 14 is transmitted, it will be appreciated, to the shoulder 22, and then to the sensing mechanism (not shown) within the weighing unit 16 for translation to a numerical read-out; the dial 28 and pointer 30 in the illustrated form of the invention. The dial 28 and pointer 30 are visible from above the upper or platform plate 14. The dial 28 in the illustrated form is of the familiar circular type using a pointer 30 and graduated scale, but other suitable read-outs, such as, for example, linear scales, or even numeric (digital) read-outs, can be used to equal advantage.

In a presently preferred form of the invention, the base plate 12 and upper or platform plate 14 are made of acrylic plastic, of the type sold under the trademarks LUCITE or PLEXIGLAS and are of one-half inch thickness. Other equivalent materials selected for strength and lightness, may also be used. Suitable dimensions for the respective plates 12 and 14 are roughly 11 x 10 inches, although, the proportions can obviously be varied for specific applications. In the presently preferred form of the invention, the weighing unit 16 is cylindrical, and its main body portion 18 has a diameter of approximately 3 inches. The upper portion 20 has a diameter of approximately 2½ inches, and thus, the width of the shoulder 22 is approximately one-quarter of an inch.

The internal mechanism to be used in the weighing unit 16 is not, per se, an aspect of this invention, but conventional spring or hydraulic units, such as those illustrated, for example, in U.S. Pat. Nos. 2,960,329, issued to Hanssen on Nov. 15, 1960, and 3,743,040, issued to Hutchinson, et al, on July 3, 1973, could be adapted for this purpose. Other suitable weighing units, such as the hydraulic unit shown in U.S. Pat. No.

3,200,897, to Gibbons, issued Aug. 17, 1965 could also be used.

Disassembly of the scale is simply a matter of lifting the upper or platform plate 14 from the shoulder 22, and then removing the weighing unit 16 from the receptacle 24. The preferred height of the weighing unit is approximately 2½ inches. Scales capable of disassembly for travel are not, per se, novel. See: U.S. Pat. No. 3,106,975, to which reference was made above, and also U.S. Pat. No. 3,565,197, issued Feb. 23, 1971, to Carter; but with apparatus in accordance with the present invention, all of the components can readily be carried within conventional suitcases or even smaller pieces of luggage.

The sizes and shapes, however, of the base plate 12 and upper or platform 14 are such that they provide a stable base, capable of receiving and supporting the weight of a person during weighing.

Although the present invention is particularly useful as a travelling bathroom-type scale, it can obviously be used for other purposes to which scales may be put, while providing the advantages of portability and collapsibility.

I claim:

1. A portable and collapsible scale, comprising a base plate adapted to rest on a support surface, a receptacle in said base plate, a weighing unit having a portion thereof complementally shaped with respect to said receptacle and adapted to be received therein when said scale is operatively disposed, and an upper plate removably engagable with said weighing unit and in spaced parallel relation to said base plate when said scale is operatively disposed, said weighing unit having weight read-out means thereon readable from above said upper plate when said upper plate is operatively disposed.

2. Apparatus in accordance with claim 1, wherein said upper plate has an opening therein, and an upper portion of said weighing unit extending into said opening, said weight read-out means being disposed on said upper portion.

3. Apparatus in accordance with claim 2, wherein said weight read-out means comprises a rotatable pointer and numerical scale.

4. Apparatus in accordance with claim 1 wherein said weighing unit has a main body portion having a first transverse dimension, an upper body portion having a transverse dimension less than said first transverse dimension, and a shoulder portion interconnecting said main and upper body portions, said upper plate having an opening therein, and said upper body portion extending into said opening when said upper plate is operatively disposed so that said upper plate rests on said shoulder portion when said upper plate is operatively disposed.

5. Apparatus in accordance with claim 4, wherein said main body portion of said weighing unit has a cross-sectional shape corresponding to the cross-sectional shape of said receptacle, said weighing unit being removably friction-fitted within said receptacle and said upper plate being removably friction-fitted to said upper body portion.

6. Apparatus in accordance with claim 5, wherein said weighing unit, said receptacle and said opening are generally circular in cross-section.

7. Apparatus in accordance with claim 3, wherein said weight read-out means comprises a rotatable pointer and numerical scale, said weight read-out means being disposed on said upper body portion and facing upwardly for reading from above said upper plate.

8. Apparatus in accordance with claim 7, wherein said main body portion of said weighing unit has a cross-sectional shape corresponding to the cross-sectional shape of said receptacle, said weighing unit being removably friction-fitted within said receptacle and said upper plate being removably friction-fitted to said upper body portion.

9. Apparatus in accordance with claim 8, wherein said receptacle is a recess opening on the upper surface of said base plate, and extending there-through.

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